

REMARKS

Claims 1, 2, 4-8, 10, 11, 16, and 17 are now pending in this application. Of those, claims 1 and 7 are in independent form.

Claims 1 and 5-7 have been amended, no additional claims have been canceled by this amendment, and no new claims have been added.

Voluntary Claim Amendments

As discussed below, the claims are believed to be in condition for allowance without substantive amendment. Non-substantive amendments to claims 1 and 5-7 are presented above merely to improve clarity and not in response to a rejection.

Claim Rejections Under 35 U.S.C. § 103

The Office Action rejects claims 1, 2, 4-8, 10, 11, 16 and 17 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,016,596 issued to Itoh (hereinafter "Itoh") in view of U.S. Patent Publication No. 2004/0128317 issued to Sull et al. (hereinafter "Sull") and further in view U.S. Patent No. 6,925,602 issued to Clapper (hereinafter "Clapper"). These rejections are respectfully traversed.

The Office Action asserts that the combination of Itoh, Sull, and Clapper discloses all features of the pending claims. However, independent claims 1 and 7 variously recite, in part:

... a first display device that displays the index images in a divided display area, the first display device changing a number by which to divide the display area in accordance with a total number of the index images extracted from the moving image of a predetermined length

None of the cited references appears to disclose that the display area is divided "in accordance with a total number of the index images extracted from the moving image". Although Itoh, which the Office Action applies for this feature, does appear to display multiple images in a divided display, that division of the display area appears to be static. Itoh does not disclose any means or method for changing the division of the display area "in accordance with a

total number of the index images extracted from the moving image". Rather, Itoh provides a scroll key 6 which suggests browsing the un-displayed thumbnail images by scrolling the screen without changing the number by which the screen is divided. Sull and Clapper do not remedy this deficiency. The division of the display is variable in Clapper, but such modification appears to be based on user preference via a button interface 36 rather than "in accordance with a total number of the index images extracted from the moving image".

Moreover, claims 1 and 7 variously recite, in part:

... wherein if said total number of index images extracted from the moving image of a predetermined length exceeds a maximum, said regular interval is elongated such that said total number of index images extracted from the moving image of a predetermined length is equal to or less than said maximum;

The Office Action concedes that Itoh and Sull do not disclose this feature. (OA, pages 3-4). Clapper is alleged to disclose "a system for facilitating access to digital video, wherein the software routing for generating a graphical user interface includes steps for setting a maximum number of frames to be displayed on the screen and setting a time interval between representative frames." (OA, at page 4.) The Office Action further alleges that Clapper implicitly "suggest[s] the processor selecting an interval when no interval has been [sic] specified by the user." (Id.) Applicants respectfully disagree with this interpretation of Clapper.

In Clapper, a user is presented with a graphical user interface used to select starting time, time interval (i.e., length of considered video segment), and number of thumbnail frames to display from within the selected time period. Images are thus extracted from digital video data and displayed according to the user's selections. (Clapper, col. 1, lines 50-60.) That is, images are extracted according to the selected number of frames to be displayed, and the particular time period selected. For example, a user may select start time: 0:00, interval: 16 minutes, and frames: 16. Sixteen frames would then be extracted from the video data beginning at time 0:00 at 1 minute intervals (16 minutes/16 frames = 1 minute/frame).

However, Clapper does not disclose a maximum limit to the number of frames which may displayed on the screen. Although a user has the ability to select a number of image frames to be displayed, Clapper does not indicate that the displayed number of image frames is in any way limited. Presumably, a practical limitation might apply (e.g., the size of the display may limit the number of humanly perceivable thumbnail images displayed). However, Clapper makes no indication that the size of the display is limited or that the size of the displayed thumbnails has a minimum limitation.

Furthermore, the suggestion that the processor selects a "maximum" number of frames is without credible support. Clapper discloses only that if a user does not actively select the number of frames to display, a "default" number of frames are displayed. Clapper does not suggest, much less disclose, that the default number of frames to be displayed is a "maximum" number.

In contrast, claims 1 and 7 of the application recite that individual frame images are extracted as index images from a moving image at a regular interval. The images are displayed in a divided display "in accordance with the total number of the index images extracted". Division of a display area for displaying the index images is determined as a function of the number of index images, rather than the opposite taught by Clapper. Moreover, the digital camera which extracts the index images provides a maximum number of index images which can be simultaneously displayed. The number of index images displayed is a consequence of the number extracted. If the regular interval results in too many index images to be displayed (i.e., exceeds the maximum number), the index images are re-extracted using a longer interval, so that they may all be displayed simultaneously.

In summary, claimed embodiments of the present invention differ significantly from the cited prior art disclosures because the prior art does not disclose at least 1) division of the display screen in the present embodiments that depends on a total number of extracted index images, and 2) a maximum number for displayed thumbnail images above which an extraction interval is adjusted.

Accordingly, Applicants submit that independent claims 1 and 7 are in condition for allowance. Claims 2, 4-8, 10, 11, 16, and 17 depend from claim 1 or 7 and are therefore believed to be in condition for allowance for at least the same reasons, in addition to reciting further features. (For example, the feature of claim 2 is alleged to be anticipated by Itoh. However, Itoh does not disclose that a "first display device displays all index images at the same time." This would only be true if there were only nine total index images – a feature not suggested by Itoh.) Withdrawal of the rejection and reconsideration of the claims are respectfully and earnestly solicited.

Applicants further note that Sull does not qualify as prior art. The cited Sull reference is a continuation-in-part, and the relied-upon features therein are not disclosed in the parent application 09/911,293. Accordingly, the effective date of Sull for the relied upon features is its own filing date, February 12, 2003. The present application has a priority date of October 18, 2002 (the filing date of the Japanese application). Applicants do not here provide a verified translation of the Japanese application because the above arguments are believed to be sufficient to demonstrate allowability of the claims. However, if the Examiner disagrees, and believes that Sull is necessary for a rejection, a verified translation may be provided to disqualify Sull as prior art.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact James C. Larsen, Reg. No. 58,565 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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